REMARKS

Claims 1-17 are pending in the application, of which claim 1 is independent. Claims 18-37 are canceled and claims 38-46 are withdrawn. Favorable reconsideration and further examination of the action mailed on May 12, 2008 are respectfully requested in view of the following comments of the Applicants, which are preceded by related comments of the Examiner in small bold type:

Claim Rejections - 35 USC § 102

Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Govari et al. (EP 1 203 560).

Independent claim 1 is directed to a computer-implemented distortion compensation method that includes determining an undisturbed phase for at least one of a first position indication signal and a second position indication signal. The method also includes determining an undisturbed amplitude ratio that relates the amplitude of the first position indication signal at a first frequency to the amplitude of the second position indication signal at a second frequency. The method also includes determining a disturbed amplitude and phase of the position indication signal, and adjusting a position indication based on the disturbed amplitude and phase, the undisturbed amplitude ratio, and the undisturbed phase.

Govari is not understood to disclose or suggest, for example, determining an undisturbed amplitude ratio that relates an amplitude of a first position indication signal at a first frequency to an amplitude of a second position indication signal at a second frequency, as required by independent claim 1. In the Office Action, the Examiner seems to rely on Govari at page 4, paragraphs 0020-0021 for allegedly disclosing the above-mentioned feature of claim 1. However, paragraphs 0020-0021 appear to be silent, along with the rest of the reference, in regards to this feature. In particular, paragraphs 0020-0021 of the reference read:

> [0020] Preferably, receiving the plurality of resultant signals includes: measuring a baseline phase value ϕ_ω of each of the plurality of resultant signals at the respective plurality of predetermined frequencies before introduction of the article; and measuring a phase shift ϕ_ω^{total} at the respective plurality of predetermined frequencies after introduction of the article, so that the parameter comprises a term $|\phi_\omega^{total} - \phi_\omega|$ for each of the plurality of predetermined frequencies; and wherein determining the optimal frequency includes determining a frequency ω at which $|\phi_\omega^{total} - \phi_\omega|$ is a minimum.
>
> [0021] Preferably, determining spatial coordinates of the object includes determining spatial coordinates responsive to an amplitude of a signal $|M_\omega|$ at the frequency ω.

Applicants contend that Govari is silent with respect to determining an undisturbed amplitude ratio. Rather, Govari appears to describe finding which frequency produces a minimum phase-shift when an intruding article is interfering with an electromagnetic field. Once identified, the frequency is used to calculate the position of the object that generates the electromagnetic field. In this regard, Govari at paragraph [0014] reads:

> [0014] The sensor coils generate electrical signals responsive to the magnetic fields, which signals are received by signal processing circuitry and analyzed by a computer or other processor. When a metal or other field-responsive article is in the vicinity of the object, the signals typically include position signal components responsive to the magnetic fields generated by the radiator coils at their respective instantaneous driving frequencies, and parasitic signal components responsive to parasitic magnetic fields generated due to the article. The parasitic components are typically equal in frequency to the instantaneous frequency of the driving frequency, but are shifted in phase, so that the effect at each sensor coil is to produce a combined signal having a phase and an amplitude which are shifted relative to the signal when no field-responsive article is present. The phase-shift is a function of the driving frequency, and so will vary as each driving frequency is scanned. The computer processes the combined signal to find which frequency produces a minimum phase-shift, and thus a minimum effect of the parasitic components, and this frequency is used to calculate the position of the object. Varying the driving frequency until the phase shift is a minimum is an effective method, not known in the art, for reducing the effect of field-responsive articles on the signal. (emphasis added)

As such, Govari appears to counteract the effect of an intruding field-responsive article by varying the driving frequency until the *phase shift* is a minimum. However, nowhere does Govari describe or suggest determining an undisturbed amplitude ratio.

Further, on the top of page 6 of the Office Action, the Examiner comments that "in order to calculate the ratio for the disturbed field one must know the ratio for the undisturbed field as the disturbance is relative to a field that is undisturbed." Applicants disagree with this statement that a ratio of an undisturbed field is needed to calculate a ratio for a disturbed field. Referring to

paragraph [0054] of Govari, an undisturbed amplitude A_0 is unknown and is solved by measuring quantities M_i at several known separate frequencies, in which $\overline{M}_i = \overline{A}_i + \overline{A}_i'$, and $\overline{A}_i$ represents the unperturbed field and $\overline{A}_i'$ represents the perturbed field. The quantities $\beta_i = \left|\frac{\overline{M}_i}{\overline{M}_0}\right|$ are then measured at different frequencies to separate out the undisturbed amplitude A_0. So, Govari describes using a ratio of a disturbed field to solve for the undisturbed amplitude A_0. As such, along with the reference being silent in regards to using an undisturbed amplitude ratio, such a ratio is not needed to determine the sought undisturbed amplitude A_0.

Accordingly, Govari fails to disclose or to suggest adjusting a position indication based on disturbed amplitude and phase, an undisturbed amplitude ratio, and undisturbed phase, as also required by independent claim 1.

For at least these reasons, Applicants submit that independent claim 1 is not anticipated by Govari.

Similar to claim 1, Govari is not understood to disclose or suggest the subject matter of claims 2-17, which depend directly or indirectly from independent claim 1. As such, claims 2-17 are also believed patentable.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing remarks, the Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Please apply any charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 07508-0055001.

Respectfully submitted,

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